



ROOTED IN LEGACY

# SYNCHRONY

T600 LOUDSPEAKER

## Introducing PSB's New Flagship Tower Loudspeaker

Featuring an all-new driver platform, new enclosure and crossover designs, and integrated IsoAcoustics isolation feet, PSB's new Synchrony series is the clearest expression yet of the acclaimed brand's "True to Nature" design philosophy.

The Synchrony T600 Premium Tower Speaker is a five-way transitional array employing three 6½" woofers, a 5¼" midrange driver, and a 1" titanium dome tweeter, in a heavily braced, four-chamber MDF enclosure.

The T600's woofers and midrange driver feature die-cast aluminum baskets, woven carbon-fibre cones, and rubber surrounds. Thanks to the carbon fibre cones' low mass and high rigidity, the new Synchrony drivers have wider bandwidth (about half an octave lower), higher efficiency, and lower distortion than previous driver designs from PSB. On the Synchrony drivers, mass is added to the rubber surround at the junction with the cone; this suppresses unwanted reflections, resulting in smoother frequency response. The highly rigid cast aluminum basket is entirely unaffected by cone motion.

The motors of the woofers and midrange driver have shorted turns (Faraday rings) that keep

magnetic force in the voice coil gap constant, regardless of the position of the voice coil. Combined with longer voice coils, this reduces harmonic and intermodulation distortion.

The T600's titanium dome tweeter features a neodymium magnet and Ferrofluid cooling. These measures improve maximum output and power handling, without causing dynamic compression or increasing harmonic and intermodulation distortion.

The Synchrony T600 is the culmination of a two-year development process. PSB's team of highly regarded acoustic specialists guided by renowned PSB Founder and Chief Acoustic





Designer, Paul Barton, used a sophisticated array of tools, including laser vibrometry equipment and acoustic simulation optimization software from Denmark's Loudsoft Ltd. That software enabled them to model cone, motor, crossover, and enclosure behavior. As with every PSB speaker ever made, prototypes were measured in the anechoic chamber of the world-famous Acoustics Lab of the National Research Council in Ottawa, Ontario, Canada. Data from these tests were correlated with extensive subjective listening tests.

The result is a speaker with superb tonal accuracy, thrilling dynamics, impactful bass, transparent midrange, pinpoint imaging, and exquisite micro-detail — in short, sound that is True to Nature.

### **The Crossover**

The T600 employs an advanced Linkwitz-Riley 4th order acoustic crossover between the midrange and tweeter. As with PSB's previous transitional-array designs, the Synchrony T600's tweeter is mounted below the midrange driver. With a Linkwitz-Riley crossover, this arrangement provides greater flexibility in listener position. Tonal balance remains consistent whether the listener is seated or standing.

Employing high-voltage low-dissipation film capacitors, high-current inductors with high

saturation threshold, and oxygen-free internal wiring, the Synchrony T600 has PSB's most optimized amplitude-perfect crossover to date. On-axis response is remarkably flat, deviating a mere  $\pm 1.5\text{dB}$  from 30 to 20,000Hz, and  $\pm 3\text{dB}$  from 24 to 30,000Hz.

### **The Enclosure**

The T600's MDF enclosure has more extensive internal bracing than any speaker PSB has ever built. This ultra-rigid construction minimizes cabinet resonances that can cause uneven response and blur transients.

The front baffle is clad in a 5mm-thick solid aluminum plate, which suppresses "baffle talk" that can obscure fine detail. The aluminum plate has threaded pins on the rear that grab ten small isolation cups, five on each side, that suspend the plate between the two sidewalls of the enclosure. The aluminum plate has contact with the cabinet only around its perimeter. The isolation cups decouple the aluminum plate from the enclosure, another measure that helps preserve fine detail.

The enclosure is divided into four chambers: one sealed chamber for the midrange driver and tweeter, and three identically tuned rear-ported chambers, one for each woofer.

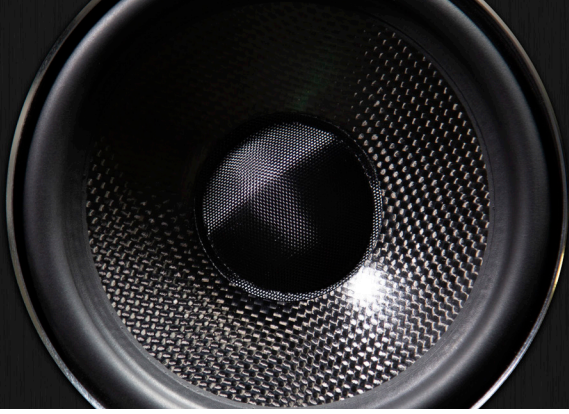
This breaks up standing waves inside the enclosure that could otherwise cause uneven response and distortion.

The topmost woofer is crossed over to the midrange driver at 450Hz, using a third-order Butterworth filter. The lower two woofers cover progressively narrower frequency bands. The transitional-array design and varied placement of the woofers result in smoother bass response, because it randomizes the floor bounce, wherein reflections of low-frequency waves from the floor interfere with direct radiation of the woofers.

Each T600 tower has four outrigger feet with custom-designed isolators that couple to the floor and dissipate mechanical energy from the cabinet and drivers. Based on IsoAcoustics' award-winning GIAA II isolators, the isolation feet prevent energy from the drivers and cabinet from being reflected back into the enclosure, and also prevent structure-borne vibrations from reaching the listener. Benefits include improved micro-detail, clearer transients, a wider soundstage, and more precise imaging.

### **Finishes and Options**

PSB's Synchrony T600 Tower Speakers are available in two gorgeous furniture-grade finishes: Satin Walnut Veneer and High Gloss Black. Other design elements, such as a tasteful Synchrony logo on the top edge of the baffle, enhance the T600's visual appeal.



The speakers are supplied with two narrow-profile black grilles that complement the enclosures. Thanks to their super-slim cross-sections, the grilles have minimal effect on the T600's sound. Magnets embedded in both the grille and enclosure assure a quick, secure fit.

Included with each T600 tower are two port plugs that can be inserted into the bass-reflex ports at the back. This lets listeners tune the speakers' bass output to suit their listening environment.

Each T600 has three pairs of insulated gold-plated five-way binding posts. The speakers come with installed jumpers for conventional single-cable amp-to-speaker connection. But the jumpers can be removed for tri-amping or tri-wiring, or shifted for bi-amping or bi-wiring.

### **Natural Harmony**

With its new driver platform, enclosure design, amplitude-perfect Linkwitz-Riley acoustic crossover, and integrated IsoAcoustics isolators, the Synchrony T600 Tower is the most advanced speaker PSB has ever built. Each of these refinements makes a meaningful contribution to the Synchrony T600's performance. Combined, they enable the T600 to deliver revelatory, transporting listening experiences, with both music and movies.

- **3 x 6½" woofers and 1 x 5¼" midrange driver with woven carbon fibre cones, cast aluminum baskets, mass-loaded rubber surrounds, and advanced motor structures**
- **1 x 1" titanium dome tweeter with Ferrofluid damping and neodymium magnet**
- **Amplitude-perfect Linkwitz-Riley 4th-order acoustic crossover**
- **Low-resonance cabinet design with aluminum-clad front baffles and individually-tuned chambers with rear-firing ports for each woofer**
- **Low-resonance MDF cabinet with extensive bracing and decoupled aluminum-clad front baffle**
- **Individually tuned chambers with rear-firing ports for each woofer**
- **Five-way transitional array design that randomizes the floor bounce**
- **Outrigger stabilizers with integrated IsoAcoustics isolators**
- **Satin Walnut Veneer and High Gloss Black with acoustically transparent, magnetically attached grilles**

# SPECIFICATIONS

## T600

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### Frequency Response

On Axis @0 +/- 3db	24-23,000Hz
<b>On axis @0 +/- 1 1/2db</b>	<b>30-20,000Hz</b>
off Axis @ 30 +/- 1 1/2db	30-10,000Hz
LF Cutoff	20Hz

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### Sensitivity

Anechoic	89dB
<b>Listening Room</b>	<b>91dB</b>

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### Impedance

<b>Nominal</b>	<b>4 Ohms</b>
Minimal	4 Ohms

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### Input Power

Recommended	20-300 Watts
<b>Program</b>	<b>300 Watts</b>

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### Acoustic Design

<b>Tweeter</b>	<b>1" (25mm)</b> Titanium Dome with Ferrofluid
<b>Midrange</b>	<b>5 1/4" (133mm)</b> Cast Basket Carbon Fibre Cone Rubber Surround
<b>Woofers</b>	<b>3 x 6 1/2" (165mm)</b> Cast Basket Carbon Fibre Cone Rubber Surround
<b>Crossover</b>	<b>450Hz B3, 1800Hz LR4</b>

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### Design Type

Transitional 3-way system  
Bass Reflex,  
Triple Rear facing ports  
3 Individual Woofer chambers

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### Dimensions

Size ( WxHxD) **9 x 41 1/4 x 13 1/2"**

228 x 1048 x 343mm

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### Net Weight

**77 lbs**  
34.9 kg

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### Finish

Satin Walnut  
High Gloss Black

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### Features

Triple, 5-way  
Gold-plated Binding Posts  
Tri-wireable/Tri-ampable,  
Magnetic Grille  
Outrigger stabilizers with  
isoAcoustic GAIA II feet  
Port Plug (x2)  
Subdivided discrete chambers  
3 Individual Woofer Chambers  
Triple Rear Facing Ports

